

July 2015

Elk County

Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

A total of 11 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Elk County economy.¹ These 11 sectors have a total direct output of approximately \$49 million and support 353.3 jobs in Elk County. Running the model for all 11 sectors simultaneously produces the following results:

Agriculture Contribution in Elk County

| Impact Type ² | Employment | % of Total Employment | Total Value Added ³ | % of Gross Regional Product ⁴ | Output ⁵ | % of Gross Regional Product |
|--------------------------|------------|--------------------------|-----------------------------------|--|---------------------|-----------------------------------|
| Direct Effect | 353.3 | 23% | \$21,770,653 | 32% | \$49,386,506 | 72% |
| Indirect Effect | 31.5 | 2% | \$1,237,478 | 2% | \$3,415,483 | 5% |
| Induced Effect | 22.4 | 1% | \$1,095,272 | 2% | \$2,338,256 | 3% |
| Total Effect | 407.2 | 27% | \$24,103,403 | 35% | \$55,140,245 | 80% |

As shown in the above table, agriculture, food, and food processing supports 407.2 jobs, or 27% of the entire workforce in the county. These industries provide a total economic contribution of approximately \$55 million, roughly 80% of Gross Region Product (GRP). As noted below in the calculation of Gross Regional Product, imports and institutional sales are subtracted. Therefore, counties that import a relatively large amount of goods and services will have a reduced GRP which may lead to agricultural output being greater than GRP.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 11 agriculture, food, and food processing sectors is approximately \$24 million, or 35% of the GRP. This indicates that personal income, business income, and taxes generated by these sectors account for 35% of the total economy.

The following tables document the overall summary numbers of the model, top industries affected by employment and output, and a listing of all industries that were analyzed.

¹ Article on building a contribution analysis in IMPLAN that avoids double counting:
https://implan.com/index.php?option=com_content&view=category&id=19

² Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

³ Value Added = Labor Income + Indirect Business Taxes + Other Property Type Income

⁴ GRP = Final Demand of Households + Governments Expenditures + Capital + Exports - Imports - Institutional Sales

⁵ Output = Intermediate Inputs + Value Added

In the top ten by employment, Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming is the top employer in the agriculture industry with 238.5 employees. This table also shows the amount of jobs that are created by the agriculture industry in Elk County.

Top 10 Industries Affected by Employment

| Sector Description: | Total Employment | Total Output |
|--|------------------|--------------|
| Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming | 238.5 | \$35,852,909 |
| All other crop farming..... | 64.4 | \$4,742,813 |
| Veterinary services | 14.5 | \$676,034 |
| Grain farming | 13.6 | \$2,762,528 |
| Securities and commodity contracts intermediation and brokerage | 11.0 | \$440,652 |
| Animal production, except cattle and poultry and eggs..... | 6.8 | \$399,351 |
| Wholesale trade..... | 6.5 | \$1,166,326 |
| Monetary authorities and depository credit intermediation | 4.8 | \$604,030 |
| Greenhouse, nursery, and floriculture production | 3.9 | \$399,849 |
| Dairy cattle and milk production..... | 3.6 | \$389,929 |

The Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming industry directly contributes approximately \$36 million to Elk County's economy. This table also shows how much revenue is generated in other industries by having a strong agriculture industry.

Top 10 Industries Affected by Output

| Sector Description: | Total Employment | Total Output |
|--|------------------|--------------|
| Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming | 238.5 | \$35,852,909 |
| All other crop farming..... | 64.4 | \$4,742,813 |
| Oilseed farming | 2.8 | \$3,560,054 |
| Grain farming | 13.6 | \$2,762,528 |
| Wholesale trade..... | 6.5 | \$1,166,326 |
| Owner-occupied dwellings | 0.0 | \$754,763 |
| Veterinary services | 14.5 | \$676,034 |
| Monetary authorities and depository credit intermediation | 4.8 | \$604,030 |
| Other local government enterprises..... | 1.7 | \$484,627 |
| Truck transportation..... | 3.6 | \$462,786 |

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture sector and the output they contributed to Elk County's economy.

[illegible]

All 105 counties in Kansas have IMPLAN models with an agriculture contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Kansas, the retail sector was omitted.